CE

Milwaukee

www.milwaukeetesters.com

Authorized Dealer:

Printed in Italy Aquarium-ENG 11/06

SMS510
ORP Controller

Every Aquarium needs individual attention.
This is why the SMS510 has a user selectable set point for the ORP (0 to 600 mV).
Simply plug the ozone generator into the controller's power plug and it will dose until the mV set point is reached.

The ozone generator will automatically switch on again if the ORP falls below the adjusted set point.

	SMS510
Range	±1000 mV
Resolution	1 mV
Accuracy (@25°C)	±5 mV
Set point range	0 to 600 mV
Alarm	active when reading is lower than set point for mV
Dosing contact	1 power plug for ozone dosing
Electrode	MA911B/2 (included)
Environment	0 to 50°C; max RH 95%
Power supply	12 VDC (included)

SMS125
pH & ORP Controller

Monitor & control pH & ORP levels with 1 single unit.
Dual set points, for pH(5.5 to 9.5) and for ORP (0 to 600 mV), adjustable with knobs.
Simply attach 1 solenoid valves and pump to the plug socket supplied to dose CO_2 and ozone as required.

The SMS125 has a Visual Led alarms.

	SMS125
Range	0.00 to 14.00 pH; ±1000 mV
Resolution	0.01; 1 mV
Accuracy (@25°C)	±0.2; ±5 mV
Set point range	5.5 to 9.5 pH; 0 to 600 mV
Alarm	active when reading is higher than set point for pH active when reading is lower than set point for mV
Dosing contact	1 power plug for CO_2 dosing and 1 power plug for ozone dosing
Electrode (included)	MA921B/2; MA921B/2
Environment	0 to 50°C; max RH 95%
Power supply	12 VDC (included)

Mi407/Mi408/Mi411/Mi412
pH, Free & Total Chlorine, Iron, Ammonia and Phosphate Photometers

The Milwaukee photometers ensure excellent repeatability and measure: pH, free & total chlorine, iron, ammonia and phosphate. This line of user-friendly photometers will give you direct readings in mg/L.

Mi407: instrument for ammonia measurement:
- range: 0.00 to 3.00 mg/L (NH_3-N)
- accuracy: ±0.04 mg/L@1.50 mg/L

Mi408: instrument for iron measurement:
- range: 0.00 to 5.00 mg/L (Iron)
- accuracy: ±0.03 mg/L @1.50 mg/L

Mi411: instrument for free & total chlorine and pH measurements:
- range: 0.00 to 5.00 mg/L Cl_2 (free & total chlorine)
- accuracy: ±0.04 mg/l @1.50 mg/L
- range: 6.5 to 8.0 pH
- accuracy: ±0.01 pH

Mi412: instrument for phosphate measurement:
- range: 0.00 to 2.50 mg/L PO_4
- accuracy: ±0.04 mg/L @1.00 mg/L

Each photometer is supplied in a hard carrying case, complete with reagents for 100 tests.

	Mi407 Ammonia	Mi408 Iron
Range	0.00 to 3.00 mg/L (NH_3-N)	0.00 to 5.00 mg/L Fe
Resolution	0.01 mg/L	0.01 mg/L
Accuracy	±0.04 mg/L @1.50 mg/L	±0.03 mg/L @1.50 mg/L
Light source	Blue Led 466 nm	tungsten lamp
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	1 x 9V (included)	1 x 9V (included)
Auto-off	after 10' of non-use	after 10' of non-use

	Mi411 Free & Total Chlorine and pH	Mi412 Phosphate
Range	0.00 to 5.00 mg/L Cl_2 0.00 to 5.00 mg/L Cl_2 6.5 to 8.0 pH	0.00 to 2.50 mg/L PO_4
Resolution	0.01 mg/L (0.00-3.50 mg/L); 0.10 mg/L (above 3.50 mg/L); 0.1 pH	0.01 mg/L
Accuracy	±0.04 mg/L @1.50 mg/L; ±0.04 mg/L @1.50 mg/L; ±0.1 pH @7.2 pH	±0.04 mg/L @1.00 mg/L
Light source	tungsten lamp	tungsten lamp
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	1 x 9V (included)	1 x 9V (included)
Auto-off	after 10' of non-use	after 10' of non-use

Refractometer
MR100ATC

The MR100ATC is a refractometer for salinity and density water measurements of your aquarium.
Each refractometer has Automatic Temperature Compensation.
The MR100ATC has a range of 0 to 100‰ (salinity) and 0,1% accuracy. The refractometer is supplied in a hard protective carrying case, and includes calibration screwdriver, pipette and user manual.

	Range	Resolution	Accuracy
MR100ATC	0-100‰ Salinity 1.000-1.070 SG	1‰ 0.001	±1‰ ±0.001

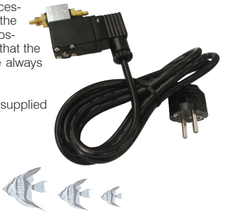
Solutions & Reagents
Calibration, Maintenance & Cleaning

Milwaukee offers a wide range of calibration, maintenance & cleaning solutions, necessary for the correct use of your electrodes and probes.

Milwaukee standard solutions are available in 230 mL bottles or 20 mL sachets.

	Solutions and reagents
MA9004	pH 4.01 buffer solution (230 mL)
MA9007	pH 7.01 buffer solution (230 mL)
MA9010	pH 10.01 buffer solution (230 mL)
MA9011	refilling electrolyte solution 3.5M KCL for ORP electrodes (230 mL)
MA9012	refilling electrolyte solution 1M KNO_3 for pH electrodes (230 mL)
MA9015	storage solution for pH/ORP electrodes (230 mL)
MA9016	cleaning solution for pH/ORP electrodes (230 mL)
MA9020	200-275 mV ORP solution (230 mL)
MA9060	12.880 µS/cm conductivity calibration solution (230 mL)
MA9061	1.413 µS/cm conductivity calibration solution (230 mL)
MA9070	zero oxygen solution (230 mL)
MA9071	electrolyte solution for D.O. probes (230 mL)
Mi504-100	free & total chlorine reagent set for 100 tests (Mi411)
Mi509-100	pH reagent set for 100 tests (Mi411)
Mi507-100	ammonia LR reagent set for 100 tests (Mi407)
Mi508-100	Iron HR reagent set for 100 tests (Mi408)
Mi511-100	free & total chlorine and pH reagent set for 100 tests (Mi411)
Mi512-100	phosphate LR reagent set for 100 tests (Mi412)
M10004B	pH 4.01 buffer solution (box of 25 x 20 mL sachet)
M10007B	pH 7.01 buffer solution (box of 25 x 20 mL sachet)
M10010B	pH 10.01 buffer solution (box of 25 x 20 mL sachet)
M10031B	1.413 µS/cm conductivity calibration solution (box of 25 x 20 mL sachet)

MA955
Solenoid valve for CO_2 dosing



The solenoid valve is an accessory for the SMS122 and the SMS125 to automate your dosing of CO_2 and makes sure that the plants of your aquarium are always healthy.

MA955, solenoid valve, is supplied with 1.5 m cable.

Electrodes & Probes for the Aquarium market

Milwaukee has a wide range of pH, ORP, conductivity and temperature electrodes & probes to meet the need of any aquarium application.

Glass-body or Epoxy-body electrodes are supplied with BNC connector and a length cable until 3 meters; conductivity probes are supplied with DIN connector.

	Electrodes, probes and accessories
MA830	stainless steel temperature probe
MA840	polarographic D.O. probe with 3 m cable
MA841	spare membrane, 5 pcs. (SM600)
MA850	pH/EC/TDS spare combination probe with 1 m cable
MA911B/2	double junction, gel filled pH electrode with BNC connector and 2 m cable
MA913B/3	epoxy-body, pH electrode with BNC connector and 3 m cable
MA916B/3	combined glass-body, refillable pH electrode with BNC connector and 3 m cable
MA921B/2	double junction, gel filled ORP electrode with platinum sensor, BNC conector and 2 m cable
MA923B/3	epoxy-body, ORP electrode with BNC connector and 3 m cable
MA73047	replaceable pH electrode (pH52)
MA73600	replaceable pH electrode (pH51)
MA73075	replaceable conductivity probe (C65)

Wide Range of PROFESSIONAL INSTRUMENTS for Fresh & Salt Water Aquarium

SATISFACTION GUARANTEED

www.milwaukeetesters.com

pH44
Smart pH Tester

The pH44 is a microprocessor based pH tester with clog-resistant cloth junction electrode specifically designed for the aquarium market.
This tester has 2 points automatic calibration, ±0.2 pH accuracy and a range of 0.0 to 14.0 pH.

The pH44 is built in a rugged "one piece" splash-proof casing preventing water infiltration and is immersible up to the LCD.
Automatic shut-off after 10 minutes saves battery and extends tester life.

	pH44
Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy	±0.2 pH
Calibration	automatic, 2 points
Environment	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	4 x 1.5V (included)
Battery life	approx. 300 hours of continuous use

pH51/pH52
Waterproof pH & Temperature Testers

The pH51 is a waterproof pH tester with 2 points manual calibration, ±0.1 pH accuracy and a range of 0.0 to 14.0 pH.
The pH52 is a waterproof pH and temperature tester with 2 points automatic calibration, a range of -2.0 to 16.0 pH and of -5.0 to 60.0°C and ±0.1 pH accuracy.
The modular design of these testers allows easy electrode and battery replacement.
The instruments are supplied in a leather casing complete with calibration solution.

	pH51	pH52
Range pH	0.0 to 14.0 pH	-2.0 to 16.0 pH
Range Temp		-5.0 to 60.0°C / 23.0 to 140.0°F
Resolution pH	0.1 pH	0.1 pH
Resolution Temp		0.1°C / 0.1°F
Accuracy pH (@25°C)	±0.1 pH	±0.1 pH
Accuracy Temp		±1°C / ±2°F
Calibration	manual, 2 points	automatic, 1 or 2 points
Temp. compensation		automatic
pH electrode	MA73600 (replaceable)	MA73047 (replaceable)
Environment	0 to 50°C / 32 to 122°F max RH 95%	-5 to 60°C / 23 to 140°F max RH 95%
Battery type	3 x 1.5V (included)	3 x 1.5V (included)
Battery life	more than 1500 hours of use	approx. 200 hours of use

C64/T74
Smart EC/TDS Tester

The C64 is an accurate conductivity tester and T74 is an accurate TDS tester; both (for fresh water) with high accuracy and automatic temperature compensation.
The C64 has 1 point manual calibration and a range of 0 to 1999 μS/cm.

The T74 has 1 point manual calibration and a range of 0 to 1999 ppm (mg/L)
The testers are built in a rugged "one piece" splash-proof casing preventing water infiltration and are immersible up to the LCD.
Automatic shut-off after 10 minutes saves battery and extends tester life.

	C64	T74
Range	0 to 1999 μS/cm	0 to 1999 ppm (mg/L)
Resolution	1 μS/cm	1 ppm
Accuracy	±2% full scale	±2% full scale
Calibration	manual, 1 point	manual, 1 point
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	4 x 1.5V (included)	4 x 1.5V (included)
Battery life	approx. 350 hours of continuous use	approx. 350 hours of continuous use

C65/T75
Sharp Waterproof EC/TDS Tester

The C65 is a waterproof conductivity tester (for fresh water) with automatic temperature compensation, 1 point manual calibration and a range of 0 to 1999 μS/cm.

The T75 is a waterproof TDS tester (for fresh water) with automatic temperature compensation, 1 point manual calibration and a range of 0 to 1999 ppm (mg/L).
The testers have a replaceable electrode and are supplied complete with sachets of calibration solution, leather casing and calibration screwdriver.

	C65	T75
Range	0 to 1999 μS/cm	0 to 1999 ppm (mg/L)
Resolution	1 μS/cm	1 ppm (mg/L)
Accuracy	±2% full scale	±2% full scale
Temperature Compensation	automatic, 5 to 50°C / 41 to 122°F, with β=2%/°C	automatic, 5 to 50°C / 41 to 122°F, with β=2%/°C
Calibration	manual, 1 point	manual, 1 point
Probe	MA73075 (replaceable)	MA73075 (replaceable)
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	3 x 1.5V (included)	3 x 1.5V (included)
Battery life	approx. 250 hours of continuous use	approx. 250 hours of continuous use

SM101/SM102
Portable pH/Temperature Meters

Milwaukee's low cost portable meters, for quick and reliable pH, ORP and temperature measurements, are ideal for the aquarium market.
The SM101 performs pH measurements with a range of 0.00 to 14.00 pH, ±0.02 pH accuracy, manual calibration in 2 points and manual temperature compensation.

The SM102 is a microprocessor based pH/temp meter with extended range (-2.00 to 16.00 pH and -5 to 70°C), ±0.01 pH accuracy, automatic calibration in 2 points and automatic temperature compensation.

	SM101	SM102
Range pH	0.00 to 14.00 pH	-2.00 to 16.00 pH
Range Temp		-5 to 70°C
Resolution pH	0.01 pH	0.01 pH
Resolution Temp		0.1°C
Accuracy pH (@25°C)	±0.02 pH	±0.01 pH
Accuracy Temp		±0.5°C
Temperature Compensation	manual, 0 to 50°C / 32°F to 122°F	automatic, 0 to 70°C / 32 to 158°F
Calibration	manual, 2 points	automatic, 1 or 2 points
pH Electrode	MA911B/1 (included)	MA911B/1 (included)
Temperature probe		MA830R (included)
Environment	0 to 50°C; max RH 95%	0 to 50°C; max RH 95%
Battery type	1 x 9V (included)	1 x 9V (included)
Battery life	approx. 300 hours of use	approx. 250 hours of use
Auto-off	after 8' of non-use	after 8' of non-use

SM500
Smart ORP Portable Meter

The SM500 is a portable meter that reads ORP with a range of ±1000 mV and ±5 mV accuracy.

SM500 is supplied complete with ORP electrode with platinum sensor, 9V battery and instructions.

	SM500
Range ORP	±1000 mV
Resolution ORP	1 mV
Accuracy (@25°C) ORP	±5 mV
ORP electrode	MA921B/1 (included)
Environment	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	1 x 9V (included)
Battery life	approx. 300 hours of use

SM301/SM401
Portable EC/TDS Meter

The SM301 is a conductivity portable meter, and the SM401 is a TDS portable meter; both (for fresh water) with automatic temperature compensation.
The SM301 has a range of 0 to 1990 μS/cm and the SM401 has a range of 0 to 1990 ppm (mg/L); both with 1 point manual calibration.
The meters are supplied complete with MA811D/1 conductivity or TDS probe with 1 meter cable, calibration solution, screwdriver for calibration and a 9V battery.

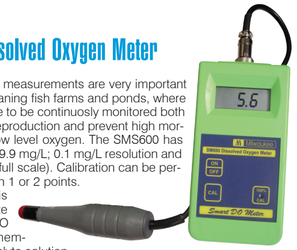
	SM301	SM401
Range	0 to 1990 μS/cm	0 to 1990 ppm
Resolution	10 μS/cm	10 ppm
Accuracy (@25°C)	±2% full scale	±2% full scale
Calibration	manual, 1 point	manual, 1 point
Conductivity probe	MA811D/1 (included)	MA811D/1 (included)
Temperature compensation	automatic, 0 to 50°C / 32 to 122°F	automatic, 0 to 50°C / 32 to 122°F
Environment	0 to 50°C; max RH 95%	0 to 50°C; max RH 95%
Battery type	1 x 9V (included)	1 x 9V (included)
Battery life	approx. 300 hours of continuous use	approx. 300 hours of continuous use

SM801
Portable pH/EC/TDS Meter

The SM801 allows you to measure pH, EC (conductivity) and TDS with just one instrument and one single probe.
The SM801 has automatic temperature compensation and a range of 0.0 to 14.0 pH, 0 to 1990 μS/cm and 0 to 1990 ppm.
The accuracy is ±0.2 pH and ±2% (full scale) for EC &TDS (for fresh water).
Supplied with the MA850 combined probe to measure pH, EC and TDS.

	SM801
Range pH	0.0 to 14.0 pH
Range EC/TDS	0 to 1990 μS/cm; 0 to 1990 ppm
Resolution pH	0.1 pH
Resolution EC/TDS	10 μS/cm; 10 ppm
Accuracy pH (@20°C)	± 0.2 pH
Accuracy EC/TDS	±2% full scale
Conversion factor	0.5
Calibration	manual, 1 point
Temperature compensation	automatic, 0 to 50°C / 32 to 122°F
Probe	MA850, combination pH/EC/TDS probe (included)
Environment	0 to 50°C; max RH 95%
Battery type	1 x 9V (included)
Battery life	approx. 150 hours of continuous use

SM600
Portable Dissolved Oxygen Meter



Dissolved Oxygen measurements are very important in efficiently maintaining fish farms and ponds, where oxygen levels have to be continuosly monitored both to attain optimal reproduction and prevent high mortality caused by low level oxygen. The SMS600 has a range of 0.0 to 19.9 mg/L; 0.1 mg/L resolution and ±1.5% accuracy (full scale). Calibration can be performed manually in 1 or 2 points.
The instrument is supplied complete with MA840 DO probe, spare membranes and electrolyte solution.

	SM600
Range O_2	0.0 to 19.9 mg/l
Resolution O_2	0.1 mg/l
Accuracy (@25°C) O_2	±1.5% full scale
Calibration	manual, 2 points
Temperature compensation	automatic, from 0 to 30°C
Probe	MA840 (included)
Environment	0 to 50°C; max RH 95%
Battery type	1 x 9V (included)
Battery life	approx. 70 hours of use

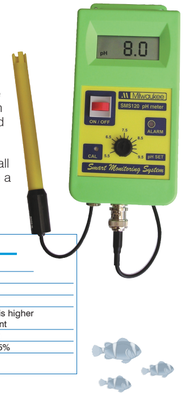
SM700
Portable Lux Meter

The SM700 is a portable Lux meter designed to perform light measurements.
It is supplied with a light sensor connected to the meter that measures from 0 to 50000 Lux.
Lux is a unit that indicates the density of light that falls on a surface.
The accuracy is ±6% of reading (full scale).

The SM700 works with a 9V alkaline battery.
Automatic shut-off after 10 minutes saves battery and extends Lux meter life.

SM700	
Range	0-1999 Lux; 2000-19999 Lux; 20000-50000 Lux
Resolution	1 Lux; 10 Lux; 100 Lux
Accuracy	±6% full scale
Environment	0 to 50°C / 32 to 122°F; max RH 95%
Battery type	1 x 9V (included)
Battery life	approx. 70 hours of continuous use
Auto-off	after 10' of non-use

SMS120
Smart pH Monitor

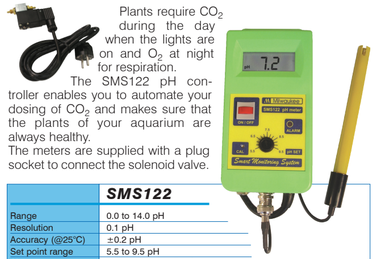


The smart pH monitor allows you to continuosly monitor pH values directly in your aquarium.
Features include: user selectable set point, visual Led alarm when values go above the set point and manual calibration.

Powered by a 12 VDC adapter all smart monitors are supplied with a clog-resistant pH electrode.

	SMS120
Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy (@25°C)	±0.2 pH
Set point range	5.5 to 9.5 pH
Alarm	active when reading is higher than selected set point
pH electrode	MA911B/2 (included)
Environment	0 to 50°C; max RH 95%
Power supply	12 VDC (included)

SMS122
Smart pH/CO_2 Controller



Plants require CO_2 during the day when the lights are on and O_2 at night for respiration.
The SMS122 pH controller enables you to automate your dosing of CO_2 and makes sure that the plants of your aquarium are always healthy.
The meters are supplied with a plug socket to connect the solenoid valve.

	SMS122
Range	0.0 to 14.0 pH
Resolution	0.1 pH
Accuracy (@25°C)	±0.2 pH
Set point range	5.5 to 9.5 pH
Alarm	active when reading is higher than set point
Dosing contact	1 power plug for CO_2 dosing
pH electrode	MA911B/2 (included)
Environment	0 to 50°C; max RH 95%
Power supply	12 VDC (included)